

TONEAudio.

ISSUE 26. 2009

The Ultimate Subwoofer

The JL Audio Gotham

By Jeff Dorgay



First of all, there will be no corny Batman puns in this review. Now that we have *that* settled, let's get on to exploring a fantastic subwoofer, shall we? The JL Audio Gotham hit the scene a few years ago featuring a pair of custom-designed 13-inch drivers and an amplifier that could deliver 3,800 watts of power. Needless to say, it redefined the standard for a premium subwoofer, and the competition is still scrambling to catch up.



With a pricetag of \$12,000 and a weight of 360 pounds, this is no casual purchase. After living with the Gotham for some time, my advice is not to take it for a test drive unless you are ready to write the check; when it's gone, there will be a big hole in your system where the bass used to be. And honestly, you need a pair of them, so budget accordingly.

Once uncrated, the Gotham is a thing of beauty. A high-gloss black finish with a satin-finished aluminum control panel and a large medium-blue power indicator inside the gain control makes it look like a futuristic bass-bot. Though it is gently curved, it still makes a statement in your room (especially if you have two of them) and has a substantial footprint. It is 34 inches tall 21.5 inches wide and 24 inches deep. You will definitely need a few friends and a piano dolly to move the Gotham to its ultimate resting place in your listening room.

Where to put the darn thing?

Once you've determined that your floor can handle the weight of the Gotham, the next step is to make sure you have adequate power. I'd suggest a dedicated 20-amp circuit for the Gotham considering its maximum output, just to make sure you're getting every bit of the power you paid for. *(continued)*



The ARO (Automatic Room Optimization) feature ... uses a microphone calibrated to the response characteristics of the subwoofer, which is placed at your approximate listening position.

My only complaint with the Gotham is that I wish they would come up with a set of casters that is similar to what Wilson supplies with their Maxx and X-2 speakers so that initial placement would be easier. But hey, no pain, no gain in the world of high-performance audio. I had exhausted numerous placement options and all of the Energizer bunnies that were enlisted to move the Gotham, but by the end of the first day, I still didn't have the bass *quite right*.

As I mentioned in my review earlier this year of the JL Audio F110 Fathom subwoofers, JL Audio has the most comprehensive instruction manual I've experienced, which thoroughly outlines all the facets of subwoofer setup. They also mention that two subwoofers is really the ideal way to go, and while I normally love to suggest ways to spend your hard earned money, \$24,000 and more than 700 additional pounds of gear in your listening room may require some negotiation with those who share your living space. There will be no sneaking a pair of Gothams into the house unnoticed.

We'll have some input at the end of the review from TONEAudio columnist Jacob Heilbrunn who actually has a pair of Gothams in his listening room. I will be paying Jacob a visit in 2010 to experience this first hand, but for now we will be discussing the merit of the single Gotham in my system.

After trying quite a few different placement options (much to the dismay of the bunnies), the optimum spot was discovered just behind my listening-room couch, facing rearward. I had tried the middle of the listening room, in between the speakers, everywhere from directly in the middle to various asymmetrical placements. But I still heard bass coming from a big box in the middle of the room. Behind the couch turned out to be the magic location that allowed the Gotham to blend perfectly with my GamuT S-7s. The last time I ran a test-tone sweep in my room to investigate the low bass performance of the GamuT's, I found they played solidly down to 30hz, with some output at 25hz, then dropping off steeply after that point. With the Gotham in place, the output was solid at 25hz, 20hz and even 18hz, although when playing the 18hz tone, it was more *feel* than *hear*.

To replicate a pair of Gothams, I returned the two F110's to the system, just to the inside of the main speakers. This ended up evening out the low frequencies even better, but I'm sure a pair of Gotham's would be the best. If you can't be with the one you love, love the one you're with.

The Secret to Easy Setup

Adding a subwoofer can often create as many problems as it solves and getting perfect integration with the main speakers can be tough. While the home-theater crowd may be looking for the maximum level of bass output to reproduce those explosions and car crashes, a high-performance audio system has different goals. *(continued)*



Pumping out a lot of bass at a high SPL is one thing, but achieving low bass response with authority and definition is much more difficult. With the Gotham(s) installed, you might even find a few things in your room that rattle at subterranean frequencies that will require attention.

Depending on the room, I've always spent a lot of time with subwoofer setup, but the ARO (Automatic Room Optimization) feature built into the JL Audio subwoofers is a *big* help. You can read about ARO further on the JL website, but to simplify, it uses a microphone calibrated to the response characteristics of the subwoofer, which is placed at your approximate listening position.

A few minutes worth of frequency sweeps are made from the subterranean to about 200hz as the ARO circuit measures and analyzes the bass modes in your room. Then, an EQ curve is generated for your room so the Gotham sounds great from your listening position. This takes about three minutes and really comes in handy when you have more than one subwoofer to work with.

Once the initial calibration is done, you can tweek the setup further by using three controls on the top panel. The phase control lets you set the Gotham between zero and 280 degrees out of phase with your main speakers. This should be adjusted to get the tightest bass and the best integration with the mains. The frequency control sets the effective crossover frequency of the Gotham, and as one who sees a subwoofer as a device to truly extend the low frequencies, I'd say it should be set as low as possible. Again, the goal is always seamless integration with the mains. Last, the ELF trim control is a fine level adjustment.

Working with all three of these controls after you've run ARO is like sorting out VTA on your turntable. As you adjust one, you may have to play with the other two to get things just right. But once you do, it is awesome.

Even if you use the stock calibration, you will be surprised at how close you can optimize the performance. Where the ARO circuitry really shines is in a situation with less than optimum placement. Whenever I just tucked the Gotham in the room somewhere with no attention paid to placement, the ARO was able to compensate for most of the self-induced error. Make no mistake, there will be one or two perfect spots in your room, and that's what to shoot for if it works with your environment.

A Perfect Addition to Any Setup

While I'm a fan of using a set of full-range speakers as mains and a great subwoofer to anchor the low end, that's not for everyone. What amazed me about the Gotham was how *high* it would go up without mid-bass bloat. When it was still in the center of the room, I tried it with a number of speakers, all with excellent results. *(continued)*

The Gotham is more than fast enough to keep up with Magnepans or MartinLogan speakers, and it is incredibly good with a pair of mini monitors. I even used the Gotham with a pair of Spica TC-50's that we have in for review. The Focal Diablos and the Gotham made a particularly great combination, and had seamless integration. A few friends that have heard the \$170k Grande Utopia EM's commented on how a Gotham and a pair of Diablos could easily become the "poor man's Grande Utopias."



Unlimited Power

Properly set up, the Gotham will add bass extension, weight and definition to your system, but the most unexpected benefit is the amount of spatial information it adds to the presentation. I guarantee that for the first week or two, you will be playing all of your favorites that have a lot of LF information.

And you may be surprised at some of the records you thought were bass heavy actually have faux-bass instead. But that extra oomph in the presentation is truly exciting.

Having a Gotham (or two) is a lot like the experience I had with the 540-horsepower Aston Martin DBS earlier this year. You get behind the wheel and floor it a few times with grins all around, but once you adjust to the power and redefine your senses, it's quite intoxicating knowing you can go 200 mph on a whim. Yet in everyday driving, that extra power and responsiveness takes away what would have been limitations.

With the Gotham in place, you no longer have limitations on the low-frequency content that your system can reproduce, whether you like full-scale orchestral music or Run DMC, and adding the "feel" dimension to the music is something I never tire of.

But the Gotham's added impact of reaching so low will add to the three dimensionality of your system. As Jacob Heilbrunn mentions below, even with musical selections that do not have a lot of obvious LF information, the room seems much bigger, and the minute you turn the Gotham off, that extra spatial information is gone.

Top of the Mountain

The Gotham is a fantastic product that can transform whatever system in which it is placed, no matter how good. If you have the room and the extra power to support it, it is one of the rare pieces of high-end audio gear that will take you somewhere you have never been. Highly recommended.



Additional Listening: Jacob Heilbrunn

Audiophiles are often prone to wrinkle their noses at subwoofers. “Silly, silly, silly,” you can almost hear them saying. And indeed, the complaints are as familiar as they are ubiquitous: too slow, too lumpy, too loud and too boomy. Too everything, it seems.

Except when it comes to the JL Audio Gotham. No subwoofer has elicited more raves in my listening room from subwoofer skeptics than the mighty Gotham. But allow me to amend that sentence. I should have said, the mighty Gothams. For I have not one but two of these mastodons lurking in my basement. Big, powerful and smooth, these subwoofers call attention to themselves except when they don't, which is most of the time.

Confused? Let me explain. Put the Gotham in and you immediately hear an expansion of the soundstage, new details and an ambience that simply wasn't there before. Put two Gothams in and you get even more of the above qualities. *(continued)*

Install four or even six Gothams, and I'm quite sure that the sound would improve even further. The more subwoofers you have in your listening area, the smoother the response can become. One subwoofer may load your room properly. May. But with two, the task becomes far, far easier. Most audiophiles, unless they're listening exclusively to mono records, bless their little hearts, would never dream of employing a single loudspeaker. But when it comes to subwoofers, they're more prone to skimp. Bass, so the argument goes, is hard to localize. It doesn't really matter if you have only one sub.

I'm here to say it ain't necessarily so. Maybe it is harder to discern where the bass is emanating from. But there does seem to be something quite satisfying about splitting the signal into left and right channels, which is what the Gotham allows you to do. It has special inputs marked for left and right channels, a feature that I haven't seen on a whole lot of other subwoofers.

The way I run the Gothams is to place each one next to a loudspeaker rather than behind it. I had them in the corners of my listening room briefly, but I found that they sounded most transparent, most potent and most articulate when placed immediately adjacent to each loudspeaker. Two subwoofers does not mean that I'm shaking the rafters with the Gothams. Quite the contrary. It allows me to run them at lower levels and to produce a more refulgent, satisfying sound. But that sound can be hard to pin down because, as I tried to suggest above, the Gothams are often out of the picture when no real deep bass frequencies are present. But they are producing ambience all the time. Turn the two subs off and it sounds as though the mains shrank in size and volume – even on a Bach solo guitar piece. Weird? Definitely. But impossible to refute. There is apparently information in the subsonic region that fills out the sound of a concert hall. Once you've heard it, you can't go back.

It would be interesting to hear the effect that another pair of subwoofers located in the rear of the room would have on the soundstage. You could go nuts and place a third pair at the halfway point of the room firing across it and at each other. This would almost surely allow me to lower the levels of the subs further and produce an even richer and weightier sound. But at some point, cost considerations do intrude as, incidentally, do the sheer size of the Gothams. But if you're considering buying JL Audio subs, I would suggest getting two of them, if affordable, as opposed to buying just one more-expensive version. Instead of wrinkling his or her respective nose, your most jaded audiophile chum will probably be left slack-jawed by their combined performance. ●

The JL Audio Gotham Subwoofer
MSRP: \$12,000

MANUFACTURER

JL Audio
www.jlaudio.com

PERIPHERALS

Analog Source Spiral Groove SG-2 turntable w/Triplanar arm and Lyra Skala cartridge TW Acoustic Raven TWO with SME iV.VI arm and Dynavector XV-1s cartridge, Furutech AG-12 tonearm cables

Digital Source Naim CD555/PS555, Wadia 781I, SimAudio 750

Phono Preamplifier Nagra VPS w/VFS isolation base and Red Wine Audio Black Lightning power supply.

Preamplifier Burmester 011, Conrad Johnson ACT 2/Series two, Nagra PL-L

Power Amplifier Burmester 911 MK3, Conrad Johnson Premier 350, McIntosh MC1.2KW's, Simaudio Moon W-7M's

Speakers Gamut S-7, Harbeth Monitor 40.1, Martin Logan CLX, Verity Audio Sarastro II, YG Acoustics Anat II studio

Cable Shunyata Aurora Interconnects, Audioquest Sub 3 subwoofer interconnects, Shunyata Stratos SP Speaker cable

Power Running Springs Dmitri and Maxim Line Conditioners, RSA HZ power cords, Shunyata Python CX power cords

Accessories Furutech DeMag, Furutech record clamp, Shunyata Dark Field Cable elevators

JACOB'S SYSTEM:

Turntable Continuum Caliburn

Preamplifier Messenger linestage and phono stage, Nagra phono stage

Amplification Classe Omega mono blocks and VTL Wotan

Loudspeakers Magnepan 20.1

Subwoofers JL Audio Gotham

Cabling Jena Labs

Power Cables Shunyata and Isoclean Supreme Focus